ABSTRACT

A method for synthesizing stereoselectively a polycyclic compound having a quaternary asymmetric carbon in an internuclear position can be provided.

The subject in the present invention can be achieved by a polycyclic ketone compound represented by the following Formula (I):

$$(R^{2})_{m} \xrightarrow{[l]{}} (R^{3})_{r}$$

$$(I)$$

(wherein R^1 represents a hydrogen atom, a hydroxyl group, a halogen atom, a silyloxy group which may be substituted or the like; R^2 may be independent from each other and the same as or different from each other and represents a halogen atom, a hydroxyl group, a cyano group, a nitro group, an amino group which may be substituted or the like; R^3 may be independent from each other and the same as or different from each other and represents a halogen atom, a hydroxyl group, a C_1 to C_{10} alkoxycarbonyl group which may be

substituted or the like; R⁴ represents a hydrogen atom, a halogen atom, a cyano group, a nitro group or the like; m represents an integer of 0 to 3; and n represents an integer of 0 to 6) and a production process for the same.